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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/863,324	05/24/2001	Mitsunori Maruyama		1377

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EXAMINER	
CHANG, VICTOR S	
ART UNIT	**PAPER NUMBER**
1771	

DATE MAILED: 10/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

S.C.

Office Action Summary	Application No.	Applicant(s)	
	09/863,324	MARUYAMA ET AL.	
	Examiner	Art Unit	
	Victor S Chang	1771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 August 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,5,6,8,9 and 13-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,5,6,8,9 and 13-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Introduction

1. The Examiner has carefully considered Applicants' amendments and remarks filed on 8/30/2004. Applicants' amendments to the specification and claim 1 have been entered.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Rejections not maintained are withdrawn. In particular, in view of the amendment to claim 1, the rejection in section 6 of Office action dated 6/2/2004 is withdrawn. Additionally, in view of Applicants' argument "None of the UV or EB curable resins disclosed in JP '097 is a copolymer and none contains a free hydroxyl group" (Remarks, page 7, top paragraph), the Examiner withdraws the rejection over JP 63-132097 individually in section 7 of Office action dated 6/2/2004.

Rejections Based on Prior Art

4. Claims 1, 2, 5, 6, 8, 9 and 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 63-132097 (translation submitted with IDS filed 2/3/04) in view of Mori et al. (US 5051295), and as evidenced by Applicants' admission, generally as set forth in section 7 of Office action dated 6/2/2004, together with the following additional reasoning.

First, the Examiner repeats (see pages 3-4 of Office action dated 6/2/2004) that JP '097 reference is directed to a transfer sheet comprising a releasing sheet (support), a cured resin layer (protective layer) of electron beam (ionization radiation) curable resin and an adhesive layer consisting of an ionizing radiation curable resin formed on the releasing surface of the releasing sheet (claim 1 of JP '097). JP '097 teaches that the adhesive layer is cured after transferring by exposing to an ionizing irradiation (claim 3 of JP '097), and the suitable composition for the curable adhesive layer is the same as the curable resin used to form the cured resin layer (translation, page 2, last two lines). JP '097 also expressly teaches the EB curable resin as a mixture of one or more kinds of prepolymer and oligomer having an ethylene unsaturated bond in a monomer, a monomer having an ethylene unsaturated bond, etc.

In respect to the heat reactive resin, Applicants' argument "Claim 1 defines the heat-reactive resin as "an acrylic copolymer of an acrylate or methacrylate monomer, as a first monomer, and a second monomer different from said first monomer and having a hydroxyl group..." JP '097 neither discloses nor suggests the hydroxy containing copolymer ... None of the UV or EB curable resins disclosed in JP '097 is a copolymer and none contains a free hydroxyl group" (Remarks, page 7, top paragraph) has been carefully considered, and the Examiner now withdraws the rejection over JP '097 individually, as set forth above. However, the Examiner repeats (see page 5 of office action dated 6/2/2004; and section 7 of Office action dated 1/22/2003) that it is also noted that Mori's invention is directed a photo mask provided with a protective film (column 1, lines 6-9). Mori expressly teaches that by using a curable compound as the

material for the protective film, a protective film comprising the curable compound can be formed on a photo mask by a very simple means without deterioration of resolution; and the resulting protective film is excellent in mechanical, optical and chemical properties (column 1, line 67 to column 2, line 5). The curable compound may be any compound which is cured by irradiation with actinic energy rays such as ultraviolet ray (column 2, lines 33-37). Examples of curable compounds include curable phosphazene compounds, curable photopolymerizable monomers, photopolymerizable prepolymers, etc. These may be used alone or in combinations of two or more (column 2, lines 38-44), and the curable group may be polymerized by heating or irradiation (column 2, lines 55-57). Suitable monomers for forming the curable compound include various hydroxyalkyl (meth)acrylates, such as 2-hydroxyethyl methacrylate and 2-hydroxyethyl acrylate, etc. (column 3, lines 10-32). As such, it would have been obvious to one skilled in the art of curable copolymers to modify JP '097 with a hydroxyalkyl (meth)acrylates containing curable compound (i.e., a hydroxyl group acrylic copolymer), as taught by Mori. It should be noted that the selection of a known equivalent material based on its suitability for its intended use supported a *prima facie* obviousness determination. See MPEP § 2144.07.

With respect to Applicants' argument "The applicability taught by JP '097 is a transfer sheet whereas the applicability taught by Mori is a protective film for a photo mask. To transpose a teaching pertaining to a protective film to another reference and with the result being a pressure sensitive adhesive is the antithesis of obviousness. A protective film and pressure sensitive adhesives have different applicabilities"

(Remarks, pages 7-8, bridging paragraph), the Examiner notes that Applicants appear to be arguing that JP '097 and Mori are not combinable, because they are not directed to the same field of endeavor. The Examiner respectfully reminds Applicants that while the incomplete translation of JP '097 (provided by Applicants after Examiner's specific request in a prior Office action dated 9/8/2003) lacks an express disclosure that the transfer sheet is used to form a protective film transfer sheet for photo masks, Applicants' own specification in the section of "BACKGROUND OF THE INVENTION" does explicitly disclose that prior art JP '097 is used to form a curable protective film transfer sheet for photo masks (paragraphs 0001-0005). As such, clearly JP '097 and Mori are directed to the same field of endeavor, and their teachings are combinable, Applicants' argument to the contrary notwithstanding.

With respect to Applicants' argument "the Examiner misinterprets the teaching at column 3, lines 31 and 32 of Mori ... A careful reading of the reference reveals that the teaching at column 3, lines 31 and 32 relates to substitutents for phosphazene compounds, i.e., to a specific group of phosphazene compounds, and in no way relates to any copolymer" (Remarks, page 8, bottom paragraph), the Examiner notes that while the relied upon hydroxyalkyl (meth)acrylates containging curable compound shown at column 3, lines 31 and 32 is a curable phosphazene compound, nonetheless it comprises hydroxyl group containing acrylate monomer units, and as such it is inherently an acrylate copolymer, Applicants' argument to the contrary is clearly semantic and notwithstanding. Additionally, the Examiner notes that while the curable phosphazene compound does not contain a free hydroxyl group, the recitation in claim

1 only recites an acrylic copolymer of a monomer having a hydroxyl group, i.e., there is no requirement for the relied upon reference to provide a free hydroxyl group, and claim 1 fails to preclude the relied upon prior art. Finally, the Examiner would like to point out that indeed Mori also expressly teaches photopolymerizable monomers including 2-hydroxypropyl acrylate (column 4, lines 14-17); and photopolymerizable prepolymers include polyurethane acrylates comprising a pendant hydroxyl group such as 2-hydroxyethyl acrylate (column 4, lines 57-60).

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Victor S Chang whose telephone number is 571-272-1474. The examiner can normally be reached on 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel H Morris can be reached on 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

VSC

Victor S Chang
Examiner
Art Unit 1771

9/23/2004

TERREL MORRIS
SUPERVISORY PATENT EXAMINER
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